

ABSTRACT

The present invention provides an air-core coil 21 wherein one conductor is wound into a spiral form to thereby
5 form consecutively, axially of the coil, a plurality of unit turn portions (25, 26, 27) which are different from each other in inner peripheral length and to form, axially of the coil, unit coil portions comprising the plurality of unit turn portions (25, 26, 27) to produce a partly finished coil
10 20, and thereafter the partly finished coil 20 is compressed to force the unit turn portion of small inner peripheral length inwardly of the unit turn portion of great inner peripheral length from among the unit turn portions providing each of the unit coil portions to thereby make each of the
15 unit coil portions multi-layered. Thus the air-core coil 21 exhibits a smaller voltage across layers than conventionally and excellent frequency characteristics.

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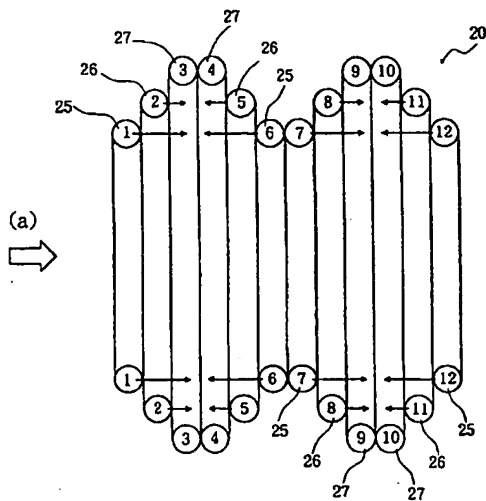
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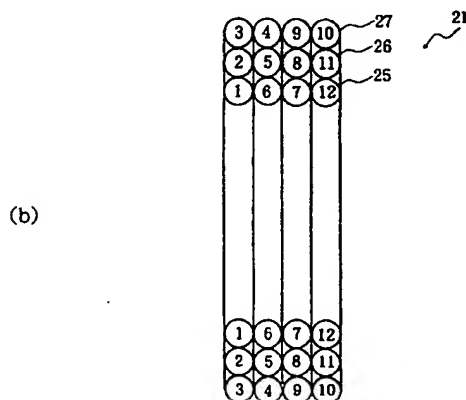
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(54) Title: AIR-CORE COIL AND MANUFACTURING METHOD THEREOF

(54) 発明の名称: 空芯コイル及びその製造方法



(57) Abstract: An air-core coil (21) is formed by one conductor wound in an eddy form so as to obtain a plurality of unit winding portions (25, 26, 27) formed continuously in the direction of the winding axis and having different inner circumferential lengths. A unit coil portion consisting of the unit winding portions (25, 26, 27) is repeatedly formed in the direction of the winding axis to prepare an intermediate coil product (20). The intermediate product (20) is compressed in the direction of the winding axis so that the unit winding portion having a smaller inner circumferential length is pushed into the unit winding portion having a larger inner circumferential length, thereby obtaining a multi-layered unit coil portion. By this air-core coil (21), it is possible to reduce the inter-layer voltage and improve the frequency characteristic as compared to the conventional coil.



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